

Applicant : Pearson  
Appl. No. : 10/568,403  
Examiner : Yevgeny Valenrod  
Docket No. : 16515.4001

REMARKS

Claims 45-48 were rejected under 35 USC 103 as unpatentable over Purdy et al (US 4,497,637). A careful review of Purdy reveals that it is directed to a system and process that is far a field of the process claimed in the subject application. Specifically, Purdy is directed to a process in which the biomass material such as wood is first pyrolyzed at temperatures in a range of 900F to 1600F using hot carrier gas containing primarily nitrogen, steam and CO<sub>2</sub> to reduce the biomass material to char and ash. Then, as in other conventional processes, the char is gasified along with pyrolysis oil in the presence of steam and oxygen to generate a syngas.

Unlike Purdy, the claims are not directed to a process in which a char is first formed from the biomass material but rather the solid organic material based feedstock is introduced directly into a reformer. The claims have been amended to indicate the solid organic material is a non-char solid organic material. Purdy effectively teaches away from the claimed invention as a result.

In addition, the claims have been amended to indicate the material has a moisture content in the range 5% to 20%. Purdy does not meet or suggest this limitation.

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Also, Purdy provides no teaching or suggestion of “controlling the proportions of carbon monoxide, hydrogen and methane in a syngas stream leaving a feedstock reformer” by

adjusting a contact time of the feedstock at elevated temperatures in the reformer within a range of from about 0.4 seconds to about 5.0 seconds, wherein the contact time is a function of the internal volume of the reformer divided by the flow rate of the syngas exiting the reformer, and

as claimed in claim 1. Although Purdy makes a generic reference to residence time for the purpose of burning up the char in its entirety, it does not teach or suggest adjusting “contact time” for the purpose of controlling the proportions of CO, H<sub>2</sub> and methane where “contact time is a function of the internal volume of the reformer divided by the flow rate of the syngas exiting the reformer.”

Lastly, Purdy describes a gasification process temperature range above 1700F. Claim 47 claims a process that includes the step of adjusting the “syngas exit temperature from about 898° C. (1650° F.) to below 926° C. (1700° F.)”. Thus, Purdy effectively teaches away from claim 47.

In view of the foregoing, Applicant submits that Purdy fails to teach or suggest the limitations of the claims and effectively teaches away from the claims, and, thus, fails to establish a *prima facie* case of obviousness. Accordingly, claims 45-48 and new claims 58-60 meet the requirement for patentability under 35 USC 103.

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CONCLUSION

Applicants respectfully submit that claims 45-48 and 58-60 are in condition for allowance. Accordingly, reconsideration and allowance of the application is requested. If the Examiner has any questions or comments, the Examiner is invited to call the undersigned at (949) 567-6700.

The Commissioner is authorized to charge any fee which may be required in connection with this Amendment to deposit account No. 15-0665.

Respectfully submitted,

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